

Boil Water Notices – Mandated vs. Precautionary

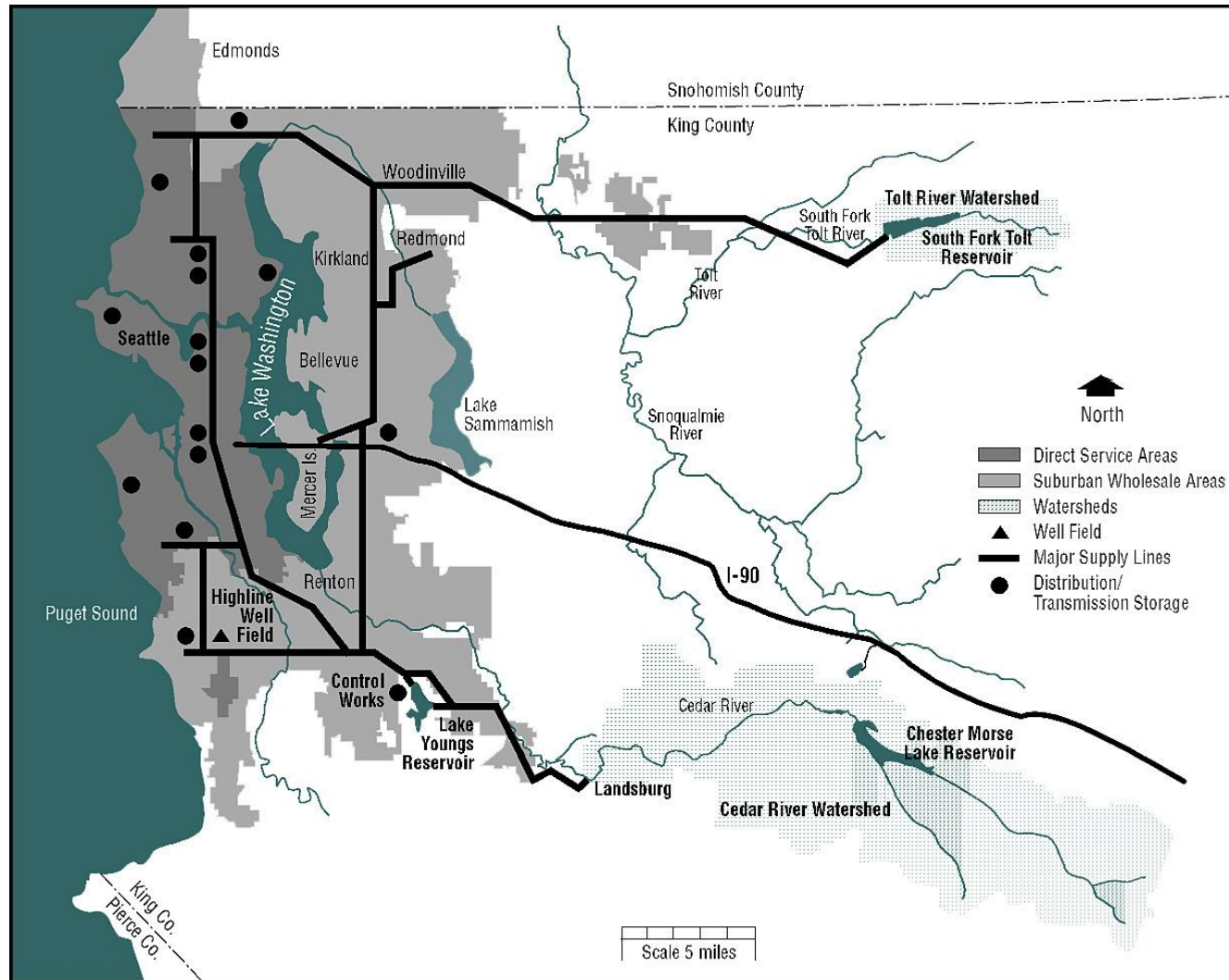
Water System Advisory Committee

October 15, 2014

Agenda

- **Seattle System Overview**
- **Mandated vs. Precautionary**
- **Regulatory Drivers**
- **Occurrences & Events**
 - Mercer Island
 - Seattle main breaks with pressure loss
- **Impacts and Challenges**

SPU Drinking Water System



Mandated vs. Precautionary

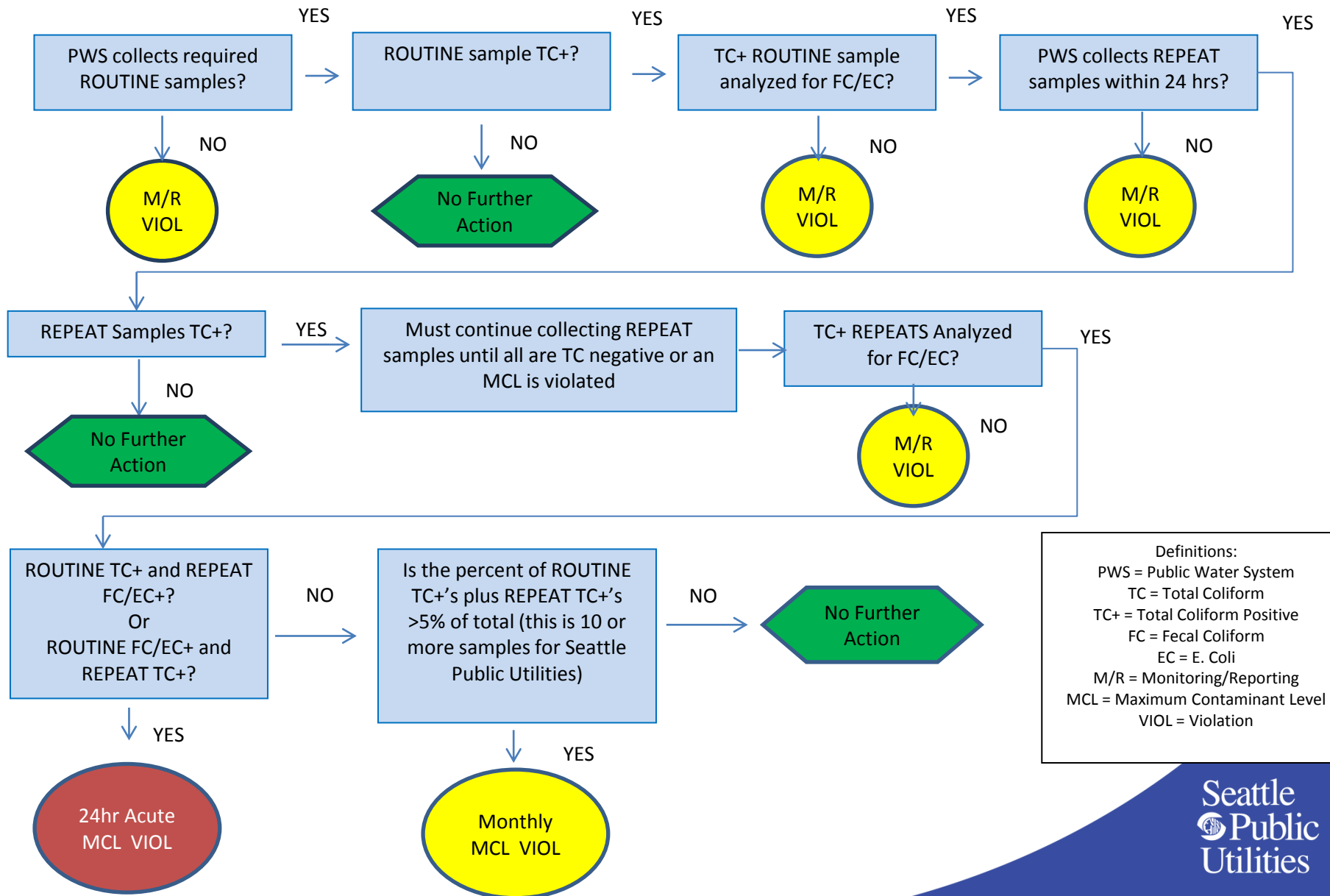
Boil Water Notice

- Contamination confirmed present
- Regulatory Tier 1 Acute MCL Violation
- Public Notice within 24 hrs
- Applies to whole water system

Precautionary Boil Water Advisory

- Contamination possible
- Guidance due to pressure loss
- Applies to impacted area/neighborhood

Regulated – TCR Compliance Flow Chart



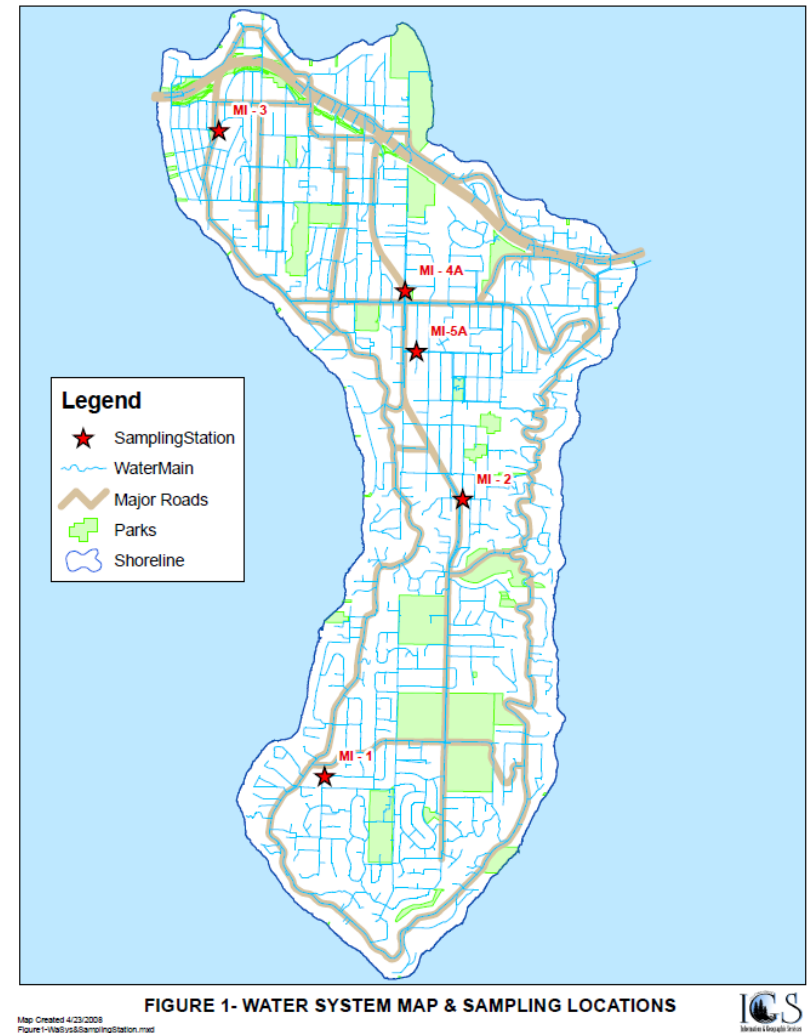
Recommended

WDOH *DRAFT* Guidance

Type I Break	Type II Break	Type III Break	Type IV Break
Positive pressure maintained during break	Positive pressure maintained during break	Loss of pressure at break site <u>or</u> limited water system depressurization elsewhere	Loss of pressure at break site <u>and</u> depressurization elsewhere in the system
Pressure maintained in pipe during repair	Pressure maintained at break site until pipe exposed & hole dewatered, shutdown limited to immediate valved off area, no loss of pressure elsewhere in system	Loss of pressure at the break site while the pipe is still buried or submerged / or no pressure loss at break site, but pressure loss elsewhere in the system	Loss of pressure at the break site while the pipe is still buried or submerged and widespread depressurization
No signs of contamination intrusion	Limited possibility of contamination intrusion	Possible contamination intrusion	Possible/ actual contamination intrusion

Mercer Island Boil Notice

- 1st E. coli detected 9/26, confirmed 9/27
 - Boil notice issued 9/27
 - Lifted 9/29
 - Monitoring clear through 10/1
- 2nd E. coli detected 10/2
 - Boil notice issued 10/2
 - Monitoring continues
- Notice Lifted 10/8
 - 6 consecutive days of clear samples
 - Extensive inspections of vaults and valves
 - System flushing
 - Booster chlorination
 - Sampling continues



Mercer Island Boil Notice

SPU Support

- Investigative sampling (collection and analysis)
 - Sent positives out for speciation, strain identification next
 - More than 100 samples in past 6 days
- On-site water quality engineering support multiple days
- Treatment crews to assist with booster chlorination
- Media support to initial press releases
- Participation in 2x daily conf. calls, press conferences

Observations

- Decision making by WDOH jointly with Mercer leadership
- PHSKC closely partnered with a focus on food establishments
- ICS structure maintained for event management
- Substantial support/outreach needed for:
 - Media relations
 - Schools and daycare
 - Elder care facilities

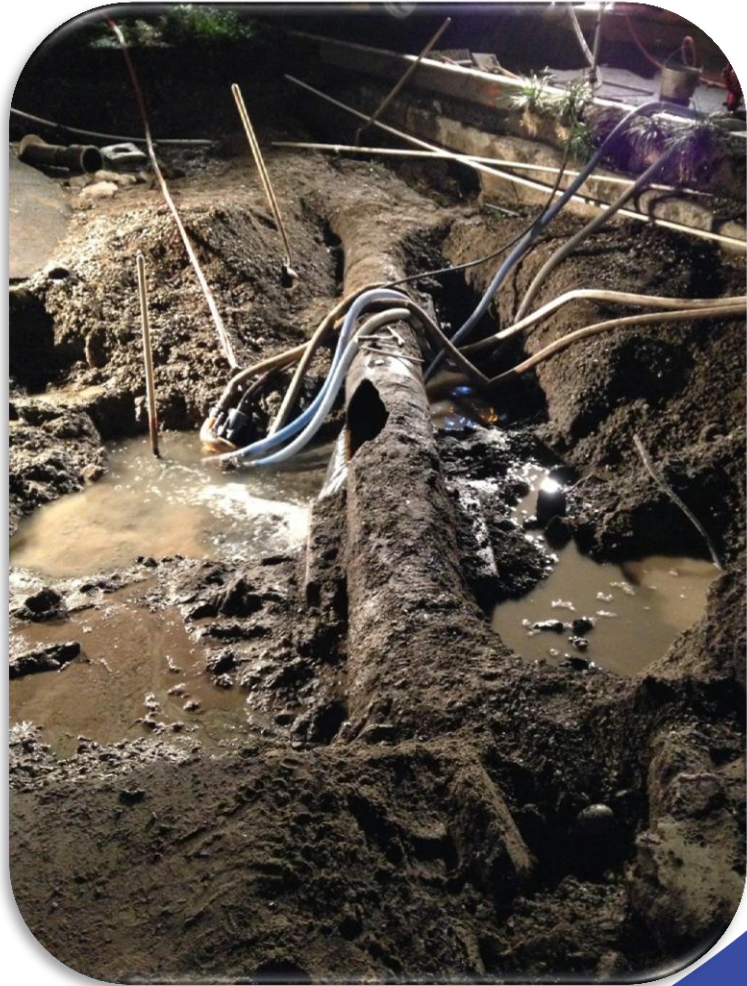
SPU Main Breaks and Pressure Loss

Events in Recent years

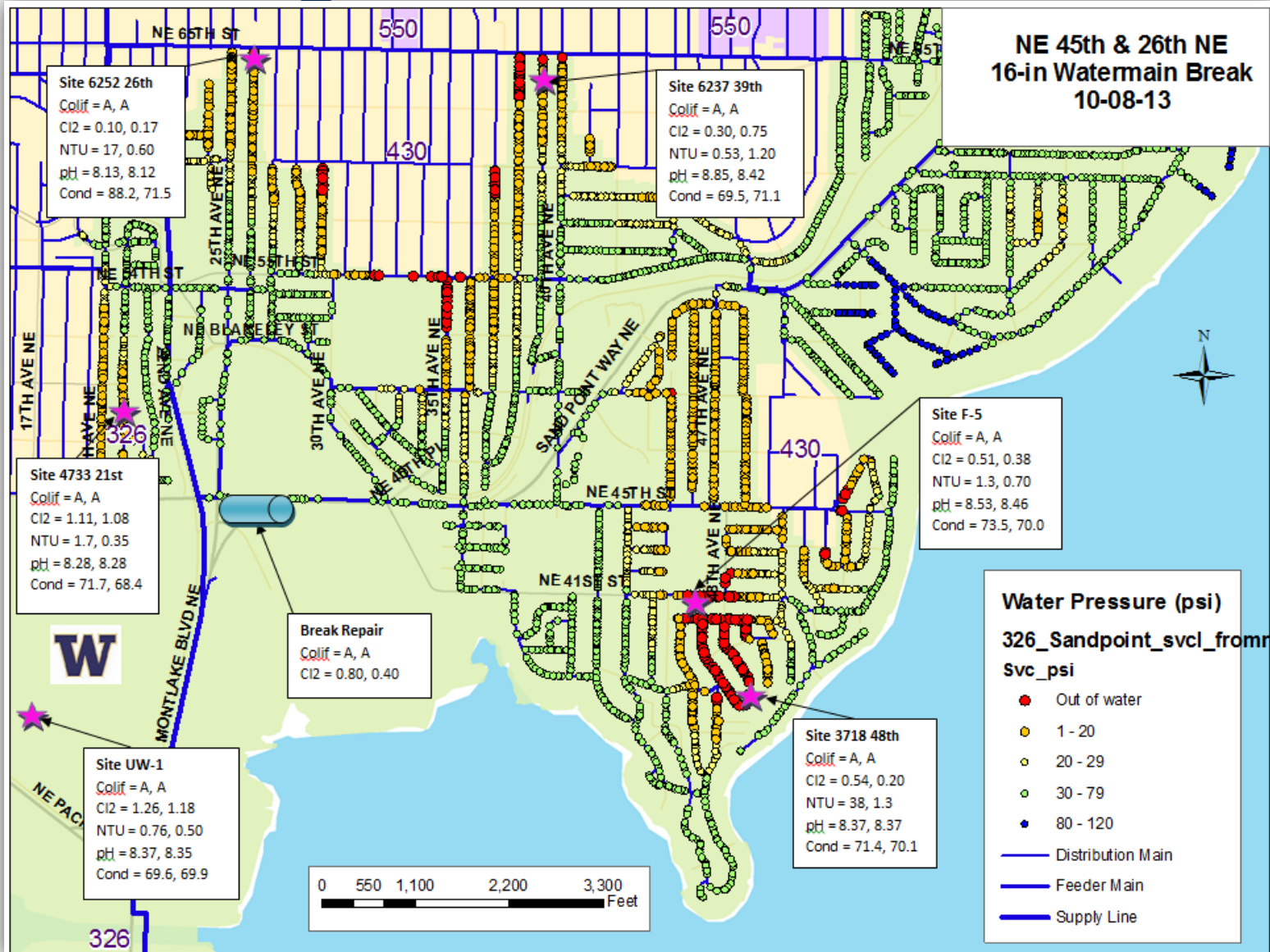
- Beacon Hill 2008 – BWA
- Graham Hill 2012 – BWA
- University Village 2013 – No BWA
- Capitol Hill 2013 – BWA
- Sandpoint Way 2014 – No BWA

U-Village Break

- 10/8/13, ~ 3:00pm
- 16" main
- Several thousand customers impacted

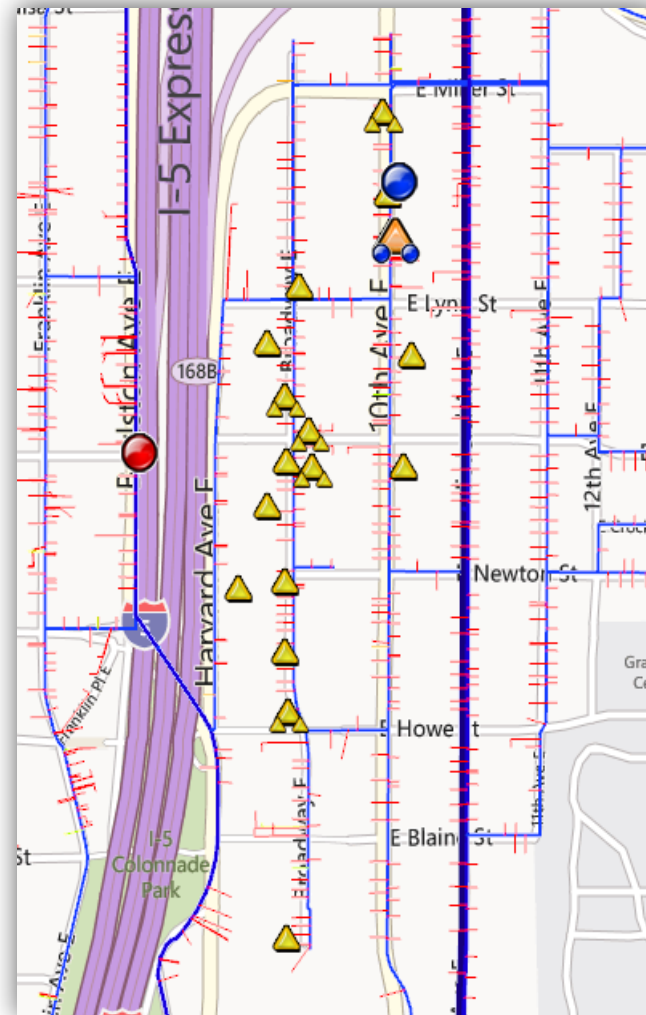


U-Village Break



Capitol Hill Break

- **10th Ave E**
- **10/30/13, ~ 3:45am**
- **8" main**
- **About 145 customers impacted**



Pressure Loss Responses

At the Break Site

- Isolate break site
- Excavate, assess, repair
- Disinfect repair parts
- Flush & sample repaired section

Beyond the Break Site

- 2 rounds minimum of bacterial sampling
- Evaluate potential sources of contamination
- Low velocity flushes
- Check chlorine residuals

Take Away's - Impacts and Challenges

- Health protection and customer confidence are primary drivers
- Early communication to customers is essential, yet...
- Early event information is limited
- Pre-planned messaging is key
- Key customers may be more impacted
 - restaurants
 - schools
 - medical facilities
- Requires partnering with WDOH and PHSKC
- Each event is different

Questions?